WHAT IS CLAIMED IS:

1. The hydroprocessing method of the instant invention, which has at least two reaction stages, comprises the following steps:

(a) passing a hydrocarbon feed into a first reaction stage, which is maintained at hydroprocessing conditions, where it is contacted with a catalyst in a fixed bed and at least a portion of the feed is converted;

(b) combining the effluent of step (a) with product material from the second reactor stage and passing the combined stream to a separation zone;

(c) separating the stream of step (b) into an unconverted liquid effluent and at least one converted stream comprising products having a boiling point below that of the feed;

(d) passing the unconverted liquid effluent from step (c) to a second reaction stage, said stage comprising a plurality of reaction zones, wherein each zone is maintained at hydrocracking conditions and separation occurs between each zone;

(e) contacting the feed in the first reaction zone of step (d) with a catalyst in a fixed bed, thereby converting at least a portion of the feed;

(f) separating the effluent of step (e) into an unconverted liquid effluent, and a hydrogen–rich converted stream;

(g) recycling the hydrogen-rich converted stream of step (f) to combine with the effluent of step (a);

(h) passing the unconverted liquid effluent from step (f) to a second reaction zone of the second stage, the zone being maintained at hydrocracking conditions;

(i) contacting the feed in the second reaction zone of step (h) with a catalyst in a fixed bed, thereby converting at least a portion of the feed;

(j) fractionating the effluent of step (i) to produce gas, naphtha, and one or more middle distillate product streams, unconverted material being recycled to step (d).

2. The process of claim 1(d), wherein the inlet temperature of each reaction zone in the second stage subsequent to the first reaction zone is lower than the previous one and the outlet temperature of each reaction zone subsequent to the first reaction zone is lower than the previous one.

3. The process of claim 2, wherein the average reaction temperature of each reaction zone subsequent to the first reaction zone is at least 50°F lower than the average reaction temperature of the previous one.

4. The process of claim 1, wherein the catalyst of each reaction zone of the second stage of step (d) is a hydrocracking catalyst.

5. The process of claim 4, wherein each of the reaction zones of the second stage is operated under hydrocracking conditions including temperatures in the range from about 400-950°F (204-510°C), reaction pressure in the range from 500 through 5000 psig (3.5-34.5 MPa), LHSV of 0.1 to 15 hr^{-1}, and hydrogen consumption of 500 through 2500 scf per barrel of liquid hydrocarbon feed (89.1-445 m^3 H_2 feed).

6. The process of claim 5, wherein more preferred hydrocracking conditions include a temperature range from 650-850°F (343°C-454°C), reaction pressure from 1500 psig through 3500 psig (10.4-24.2 MPa) and LHSV 0.25 through 2.5 hr^{-1}, and hydrogen consumption of 500 through 2500 scf per barrel of liquid hydrocarbon feed (89.1-445 m^3 H_2 feed).

7. The process of claim 1, wherein the unconverted effluent comprises hydrocarbons which boil above 700°F.

8. The process of claim 1, wherein the converted stream comprises hydrocarbons boiling below 700°F.

9. The process of claim 1, wherein the overall hydrocarbon conversion is at least 60% and the hydrocarbon conversion for each reaction zone is in the range from 20% to 40%.

10. The process of claim 1, wherein the converted stream from each reaction zone is continuously combined and fractionated into at least one fuel product.

11. The process of claim 10, wherein the preferred fuel product is diesel.

12. The process of claim 10, wherein the preferred fuel product is jet fuel.

13. The process of claim 10, wherein the preferred fuel product is naphtha.

14. The process of claim 1, wherein the feed is subjected to a preliminary hydrotreating step.